

What is claimed is:

1. A method for reducing stress migration in recessed microstructures of a microelectronic wafer comprising the steps of:

subjecting the wafer to a first annealing treatment at 25-300° C;  
cooling the wafer to room temperature; and  
subjecting the wafer to a second annealing treatment at 50-400° C.

2. The method as recited in claim 1, wherein the temperature of the first annealing treatment is from about 100-300° C.

3. The method as recited in claim 1, wherein the temperature of the second annealing treatment is from about 200-400° C.

4. The method as recited in claim 1, wherein the temperature of the second annealing treatment is greater than the temperature of the first annealing treatment.

5. The method as recited in claim 1, wherein the time duration of the second annealing treatment is greater than that of the first annealing treatment.

6. A method for reducing stress migration in recessed microstructures of a microelectronic wafer comprising the steps of:

subjecting the wafer to a first annealing treatment at 25-300° C for from about 10 seconds to about 10 hours;  
cooling the wafer to room temperature; and  
subjecting the wafer to a second annealing treatment at 50-400° C.

7. The method as recited in claim 6, wherein the temperature of the first annealing treatment is from about 100-300° C.

8. The method as recited in claim 6, wherein the temperature of the second annealing treatment is from about 200-400° C.

9. The method as recited in claim 6, wherein the temperature of the second annealing treatment is greater than the temperature of the first annealing treatment.

10. The method as recited in claim 6, wherein the time duration of the second annealing treatment is greater than that of the first annealing treatment.

11. A method for reducing stress migration in recessed microstructures of a microelectronic wafer comprising the steps of:

subjecting the wafer to a first annealing treatment at 25-300° C for from about 10-1000 seconds;

cooling the wafer to room temperature; and

subjecting the wafer to a second annealing treatment at 50-400° C.

12. The method as recited in claim 11, wherein the temperature of the first annealing treatment is from about 100-300° C.

13. The method as recited in claim 11, wherein the temperature of the second annealing treatment is from about 200-400° C.

14. The method as recited in claim 11, wherein the temperature of the second annealing treatment is greater than the temperature of the first annealing treatment.

15. The method as recited in claim 11, wherein the time duration of the second annealing treatment is greater than that of the first annealing treatment.